

Remarks/Arguments

Claims 1-7, 21 and 24 have been canceled and claims 8-10, 12-14, 17-19, 22, 23 and 25 have been amended. Applicant reserves the right to pursue the original claims and other claims in this application and other applications. New claims 26 and 27 have been added to round out the scope of protection afforded the invention. Claims 8-20, 22, 23 and 25-27 are pending in this application.

Claims 1, 4-8, 10, 11, 13 and 17 stand rejected under 35 U.S.C. §102(e) as being anticipated by Auslander (US 2003/0005303). Claims 2, 3, 9, 12, 14-16 and 18-25 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Auslander in view of Dolan (US 5,611,630). Reconsideration is respectfully requested.

The present invention is directed to a method and system for printing and verifying postage indicia. The indicia or a portion of the indicia may be printed in accordance with a particular resolution characteristic that may be changed from indicium to indicium, from one batch of mail pieces to another, or from one period of operating the postage indicia printing apparatus to another. Data is encoded into each indicium that indicates the resolution characteristic used to print the indicium or portion of the indicium. To verify the indicium, the indicium is examined, for example, by an optical magnification system, to detect the particular resolution characteristic, and the data encoded in the indicium concerning the resolution characteristic is read. The detected resolution characteristic is compared with the data to determine whether there is a match. If so, the authenticity of the indicium may be considered to be verified.

In view of the above, claim 8 as amended is directed to a method for printing an indicium that comprises "selecting a print resolution characteristic for at least a portion of the indicium; transforming a source image of the at least a portion of the indicium based on the selected print resolution characteristic; and printing the indicium on a substrate, the at least a portion of the indicium being printed based on the transformed source image, the indicium including at least one symbol, the at least one symbol including resolution data that is indicative of the selected print resolution characteristic."

Auslander, in contrast, is directed to authenticating an item by providing a security marking using an ink capable of absorbing visible light and producing a fluorescent emission under ultraviolet excitation. Thus, the ink used to print the security mark will fluoresce in red under ultraviolet light, but also has an optical density throughout the visible spectrum so that it can be read by a human operator or by a machine vision system. The high contrast provided by the dark color allows commercial scanners to image documents or indicia printed with this ink, even on dark colored envelopes. Use of this type of ink allows for easy detection of a copy of a document, as a copy of the mark, using conventional inks, will not have the fluorescent properties that the original does. (See paragraphs [0016] and [0017]). The system in Auslander does not disclose, teach or suggest in any way selecting a print resolution characteristic for at least a portion of the indicium or transforming a source image of the at least a portion of the indicium based on the selected print resolution characteristic as is done in the present invention. Furthermore, there is no disclosure, teaching or suggestion in Auslander of at least a portion of the indicium being printed based on the transformed source image, or of the indicium including at least one symbol, the at least one symbol including resolution data that is indicative of the selected print resolution characteristic as in the present invention.

As noted above, Auslander provides security by using photosensitive optically variable inks which have properties that are not commonly available. This is not the same in any respect to the present invention.

For at least the above reasons, Applicant respectfully submits that claim 8 is allowable over the prior art of record. Claims 9-11 and 13, dependent upon claim 8, are allowable along with claim 8 and on their own merits.

Independent claims 19 and 23 include limitations substantially similar to those of claim 8. The reference to Dolan does not cure any of the above deficiencies. Dolan is directed to utilizing a low cost printing mechanism having a single column or nozzles that could print postage indicia of a desired dot density using a multiple pass technique. There is no disclosure, teaching or suggestion in Dolan of selecting a print resolution

characteristic for at least a portion of the indicium, or transforming a source image of the at least a portion of the indicium based on the selected print resolution characteristic, or printing at least a portion of the indicium based on the transformed source image, or of the indicium including at least one symbol, the at least one symbol including resolution data that is indicative of the selected print resolution characteristic as in the present invention.

For at least the above reasons, Applicant respectfully submits that claims 19 and 23 are allowable over the prior art of record. Claims 20 and 22, dependent upon claim 19, are allowable along with claim 19 and on their own merits. Claims 25-27, dependent upon claim 23, are allowable along with claim 23 and on their own merits.

Independent claim 14 is directed to a method for verifying an indicium that comprises "examining the indicium to determine a print resolution characteristic used to print at least a portion of the indicium; extracting at least one symbol included in the indicium, the at least one symbol specifying an actual print resolution characteristic that should have been used to print the at least a portion of the indicium; and comparing the determined print resolution characteristic with the actual print resolution characteristic to determine whether the determined print resolution characteristic matches the actual print resolution characteristic; wherein if the determined print resolution characteristic matches the actual print resolution characteristic, the indicium is verified as authentic."

The Office Action contends that paragraph [0032] of Auslander discloses the feature of extracting at least one symbol included in the indicium, the at least one symbol specifying an actual print resolution characteristic that should have been used to print the at least a portion of the indicium. Applicant respectfully disagrees.

Paragraph [0032] of Auslander is reproduced below.

[0032] Preferably, when the item is a banknote, a document, a certificate, a tag, an identification card or badge, or a ticket, the security marking comprises a graphic design, one or more alphanumerical symbols, a bar code, or other image.

This paragraph makes a reference to the security marking that is printed using the photosensitive optically variable ink having the special properties as described above. This marking in Auslander does not in any way specify an actual print resolution characteristic that should have been used to print the at least a portion of the indicium as in the present invention.

The Office Action further contends that Col. 8, lines 31-68, of Dolan disclose the features of examining the indicium to determine a print resolution characteristic used to print at least a portion of the indicium and comparing the determined print resolution characteristic with the actual print resolution characteristic to determine whether the determined print resolution characteristic matches the actual print resolution characteristic. Applicants respectfully disagree.

Col. 8, line 31, to Col. 9, line 10, of Dolan are reproduced below.

A first method of printing which overcomes the security problem discussed above is described in connection with FIG. 6(a), 6(b), and 6(c). This method produces a final indicia image utilizing only two passes of printing mechanism 9. Referring to FIG. 6(a), during a first pass of printing mechanism 9 a complete low dot density indicia 76, of a single color ink including both numerics and fixed graphics, is formed on a mailpiece (not shown) at an indicia height resolution of 80 dpi. During this first pass of printing mechanism 9 along the "X" direction the indicia image 76 is formed in a first "Swath" of printing mechanism 9 which is defined as being the area covered by nozzles 10 during the first pass. The density of the dots along the length of the indicia 76 may vary, but a preferred resolution is 480 dpi or greater. Thus, during this first pass of printing mechanism 9 the indicia image 76 is produced which may or may not have an overall dot density in both its length and height directions which would allow it to be detectable by a facer/canceler machine.

Prior to a second pass of printing mechanism 9, it is shifted along the height of the indicia by $1/2$ the pitch of nozzles 10. Thus, during the second pass of printing mechanism 9 in either the left to right or right to left direction along the length of indicia 76, a second image 77 is produced that is interlaced with the first indicia image 76 since the first and second swaths substantially overlap each other. The dot density along the length of the second image 77 is the same as that of the first indicia image 76. The second image 77, which is a preselected portion of the first indicia image 76, is shown in FIG. 6(b) and the interlaced combination of FIGS. 6(a) and 6(b) produces

a final indicia image 79 as shown in FIG. 6(c). Thus, during the second pass, additional dots (pixels) are placed within the graphical image 80 and the originating post office area 81 to enhance the overall quality of the indicia image 76 produced during the first pass. In particular, the areas with very small detail such as "United States Postage" and the body of the eagle have additional pixels added thereto to "clean up" the image. The combination of the second or "enhancement pass" with the image 76 produces the final indicia image 79 of FIG. 6(c) which has an overall dot density that permits detection and sorting by a facer/canceler machine. The final indicia image 79 consists of portions having an indicia height density of 160 dpi and portions having an indicia height density of 80 dpi, whereas the dot density along the length of the indicia can, for example, be 480 dpi or as discussed above.

The above passage relates to printing an indicia image utilizing two passes of a printing mechanism in which two images are printed that are interlaced with each other. The final density of the image allows it to be detected by a facer/canceler machine. Nowhere in the above passage, or anywhere else in Dolan, for that matter, is there any disclosure, teaching or suggestion of examining the indicium to determine a print resolution characteristic used to print at least a portion of the indicium and comparing the determined print resolution characteristic with the actual print resolution characteristic to determine whether the determined print resolution characteristic matches the actual print resolution characteristic.

As described above, there is no disclosure, teaching or suggestion in Auslander or Dolan, either alone or in combination, of examining the indicium to determine a print resolution characteristic used to print at least a portion of the indicium, or extracting at least one symbol included in the indicium, the at least one symbol specifying an actual print resolution characteristic that should have been used to print the at least a portion of the indicium, or of comparing the determined print resolution characteristic with the actual print resolution characteristic to determine whether the determined print resolution characteristic matches the actual print resolution characteristic as is done in the present invention.

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For at least the above reasons, Applicant respectfully submits that claim 14 is allowable over the prior art of record. Claims 15-18, dependent upon claim 14, are allowable along with claim 14 and on their own merits.

In view of the foregoing amendments and remarks, it is respectfully submitted that the claims of this application are now in a condition for allowance and favorable action thereon is requested.

Respectfully submitted,

/Brian A. Lemm/
Brian A. Lemm
Reg. No. 43,748
Attorney of Record
Telephone (203) 924-3836

PITNEY BOWES INC.
Intellectual Property and
Technology Law Department
35 Waterview Drive
P.O. Box 3000
Shelton, CT 06484-8000